

IN THE U.S. PATENT AND TRADEMARK OFFICE

APPLICANT: Peter GAISER et al.
INTERNATIONAL APPLN. NO.: PCT/EP96/02633
SERIAL NO.: 08/981,233
FILED: December 19, 1997
FOR: PROCESS AND DEVICE FOR CONTINUOUSLY
DRYING PROTEIN-CONTAINING SLUDGE

INFORMATION DISCLOSURE STATEMENT
(SUBMISSION AFTER FILING OF AN APPLICATION
BUT BEFORE FINAL REJECTION OR NOTICE OF ALLOWANCE)

Assistant Commissioner for Patents
Washington, DC 20231
Sir:

April 2, 1998

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

II. COPIES (check at least one box)

- a. X Submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- b. Some or all of the documents listed on the PTO-1449 are not enclosed because they were cited in the International Search Report and copies should already be in the PTO file. If copies are needed, please contact the undersigned.

III. CONCISE EXPLANATION OF THE RELEVANCE
(check at least one box)

a. X

DOCUMENTS NOT IN THE ENGLISH LANGUAGE

A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:

DE 42 42 747 A1, DE 39 02 446 C1 and DE 29 43 558 A1 are discussed on pages 2 and 3 of the specification.

DE 37 31 720 C2 discloses a method for drying of solid materials in a fluidized bed. However, the teaching of this prior art is different in that the so-called "sticky" phase will be passed in a pre-step using a mechanical drying apparatus and not in the fluidized bed.

DE 35 35 435 A1 does not refer to the problem of drying sewage sludge, but to the aspect of utilization of the dried material.

DE 44 04 813 C1 discloses a process for fluidized-bed drying of sludge. There, dry material will be lead back and mixed with moist material. The thus disclosed method in its effects is similar to the method disclosed in document DE 29 43 558 A1 which has been acknowledged in the introductory part of the description.

DE 36 00 400 A1 discloses a method for conditioning of lime sludge which is in its properties rather different from protein-containing sludge as for example the wedge sludge.

DE 28 20 729 A1 discloses a method for preparing granulated fertilizers of organic sludge. This sludge will be fed with strong dilution into a mechanical mixed fluidized bed zone. There is no indication with regard to a "sticky" phase during this drying process so that it appears that this problem will not arise because of the strong dilution. Further, the efficiency of this known process

is relatively low. In addition, no granulating step is disclosed in this document.

DE 15 92 583 A discloses a method for preparing granulated fertilizers. There, a chemical reaction occurs in the mixing device which allows the products to dry and granulate. However, the drying process of the present application is a physical drying. In addition, the drying will not be carried out in a fluidized bed in this known state of the art.

WO 94/14730 discloses a method and an apparatus for producing plant nutritive pellets from wastewater sludge. In difference to the present application a powder will be added to the moist particles which prevents them from sticking together. This powder effects a pre-drying step which is useful to overcome the so-called "sticky" phase.

- b. ☐ **DOCUMENTS IN THE ENGLISH LANGUAGE**
All of the patents, publications or other information are in the English language. No statement of relevancy is required.
- c. ☒ **ENGLISH LANGUAGE SEARCH REPORT**
An English language version of the search report or action which indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(A) (3).
- d. ☐ **OTHER**
The following additional information is provided for the Examiner's consideration.

FEEs

IV. ☒ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b):
(check one box)

- a. ☐ within three months of the filing date of a national application (37 C.F.R. § 1.97(b)(1)). No fee or statement is required.

- b. ☐ within three months of the date of entry of the national stage as set forth in \$1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or statement is required.
- c. ☒ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or statement is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the statement under 37 C.F.R. § 1.97(e) below, or, if no statement has been made, charge our deposit account in the amount of \$240.00 as required by 37 C.F.R. § 1.17(p).

V. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c)(1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c)(2)).

- a. ☐ No statement; therefore, a fee in the amount of \$240.00 as required by 37 C.F.R. § 1.17(p).
or
- b. ☐ See the statement below. No fee is required.

VI. STATEMENT UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby states that

- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application and, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

- c. — Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application and, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

VII. PAYMENT OF FEES (check one box)

- A check in the amount of \$240.00 as required by 37 C.F.R. § 1.17(p) is enclosed for the above-identified fee.
- Please charge Deposit Account No. 02-2448 in the amount required by 37 C.F.R. § 1.17(p) for the above-indicated fee. A triplicate copy of this paper is attached.
- X No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 02-2448.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 CFR \$1.16 or under \$1.17; particularly, extension of time fees.

Respectfully submitted,

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By


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Enclosures:

 X PTO-1449
 X References
 X Foreign Search Report
 Fee
 Other:

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